

PC-12 | 500311

PC-12

Description	PC-12 is a mouse neuroblastoma cell line derived from a 12-day-old mouse embryo. It is a highly proliferative, undifferentiated cell line that can be maintained in culture for extended periods. PC-12 cells are typically grown in DMEM supplemented with 10% fetal bovine serum (FBS). Upon differentiation, they can form neuroblast-like structures and express various neurochemical markers. PC-12 cells are commonly used in studies of neurogenesis, differentiation, and neurodegeneration. They are also used as a model for studying the effects of various drugs and toxins on neuronal cells. PC-12 cells are highly sensitive to nerve growth factor (NGF) and other neurotrophic factors, which induce differentiation and neurite outgrowth. The cell line was established by Dr. New England Deaconess and is now maintained by Cytion. PC-12 cells are typically grown in 40% FBS medium.
Organism	Mouse
Tissue	Neuroblastoma
Disease	Neuroblastoma
Metastatic site	PC-12 cells are highly metastatic and can form tumors in various organs, including the lungs, liver, and spleen. They are also known to metastasize to the brain and bone marrow.
Applications	PC-12 cells are used in a variety of applications, including studies of neurogenesis, differentiation, and neurodegeneration. They are also used as a model for studying the effects of various drugs and toxins on neuronal cells. PC-12 cells are highly sensitive to nerve growth factor (NGF) and other neurotrophic factors, which induce differentiation and neurite outgrowth.
Synonyms	PC 12, PC12

PC-12

Age	PC-12
Gender	Male
Ethnicity	PC-12
Morphology	PC-12
Cell type	PC-12 (Neuroblastoma) (Neuroblastoma/Neuroblastoma)
Growth properties	PC-12/PC-12 (PC-12 is a highly proliferative, undifferentiated cell line that can be maintained in culture for extended periods. It is highly sensitive to nerve growth factor (NGF) and other neurotrophic factors, which induce differentiation and neurite outgrowth.)

PC-12

Citation	PC-12 (Cytion 500311)
----------	-----------------------

PC-12 | 500311

Biosafety level	1
NCBI_TaxID	10116
CellosaurusAccession	CVCL_S979
GMO Status	Not a GMO; cells are not genetically modified and are "wildtype"

Characteristics

Receptors expressed	NGF (NGF)
Tumorigenic	Yes, cells form tumours in mice, subcutaneous
Products	NGF, BDNF
Karyotype	40 chromosomes, 38 chromosomes X,Y

Media

Culture Medium	RPMI 1640, w: 2.0 mM NaH_2PO_4 , w: 2.0 g/L NaHCO_3 (Cytion 820700a)
Supplements	10% FBS
Dissociation Reagent	TrypLE Express (Cytion 820700a); 10 min at 37°C

Subculturing: Cells are grown in 10% FBS medium. When cells reach confluence, they are trypsinized and seeded into new flasks. The medium is changed every 2-3 days.

Seeding density: 1×10^4 cells/cm²

Fluid renewal: 2-3 times per week

Post-Thaw Recovery: Cells are thawed in a water bath at 37°C and seeded into a flask with 10% FBS medium. After 48 hours, the medium is changed.

Freeze medium: Cells are frozen in 50% $\text{Na}_2\text{S}_2\text{O}_8$ + 40% FBS + 10% DMSO, CM-1 (Cytion 800100), and 10% FBS.

PC-12 | 500311

Thawing and
Culturing Cells

1. 将细胞悬液缓慢加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。
2. 将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。
3. 将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。
4. 将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。
5. 将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。
6. 将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。
7. 将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。
8. 将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。

Incubation
Atmosphere

37°C, 5% CO₂, 饱和湿度

Flask Coating

无涂层

Freezing
Procedure

将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。

Shipping
Conditions

将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。

Storage
Conditions

将细胞悬液加入含有培养基的细胞培养瓶中，轻轻混匀，然后将培养瓶置于37°C CO₂培养箱中培养。

细胞培养

Sterility

细胞培养瓶在出厂前经过严格的灭菌处理，确保无菌。PCR 扩增产物在 150°C 下加热 10 分钟，以灭活 Taq 聚合酶。细胞培养液在 100°C 下加热 10 分钟，以灭活所有酶类。

Product sheet

PC-12 | 500311

STR

- Rat_D1Wox31: 100
- Rat_D2Wox37: 156
- Rat_D19Wox11: 228
- Rat_D10Wox8: 262,266
- Rat_D4Wox7: 145
- Rat_D2Wox27: 207
- Rat_D5Rat33: 116, 118, 120
- Rat_D10Wox11: 174
- Rat_D1Wox23: 226,23
- Rat_D12Wox1: 402,406
- Rat_D6Wox2: 104
- Rat_D8Wox7: 182
- Rat_D6Cebr1: 229,231,233
- SRY: x,Y